

WHAT IS CLAIMED IS:

1. An image forming apparatus comprising:

a charger that charges a body with a voltage in which an AC voltage is superimposed on an DC voltage, wherein the charger is not in  
5 contact with the body;

a humidity detecting unit that detects a humidity in a space between the charger and the body; and

a correcting unit that decides a magnitude of the AC voltage to be superimposed on the DC voltage based on the humidity.

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2. The image forming apparatus according to claim 1, further comprising:

a current detecting unit that detects direct current; and

a control unit that varies the magnitude of the AC voltage in  
15 accordance with the current detected and the humidity.

3. The image forming apparatus according to claim 1, wherein the control unit varies the magnitude of the AC voltage if a change in the humidity exceeds a predetermined value.

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4. The image forming apparatus according to claim 1, wherein the control unit varies the magnitude of the AC voltage after elapsing of prescribed time upon a power supply to the control unit is turned ON.

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5. The image forming apparatus according to claim 1, wherein the control unit varies the magnitude of the AC voltage upon passage of prescribed number of papers.

5 6. The image forming apparatus according to claim 2, wherein the control unit carries out bias change of the AC voltage and sets the bias to a fixed value during image forming either of when an area corresponding to a non-image area on a latent image carrier is charged and when a charging bias is not applied.

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7. The image forming apparatus according to claim 1, wherein the charger is a roller that includes a material having a medium electric resistance.

15 8. The image forming apparatus according to claim 2, wherein the control unit changes bias of the AC voltage by a feed back control in accordance with the humidity.

9. An image forming apparatus comprising:

20 a charger that charges a body with a voltage in which an AC voltage is superimposed on an DC voltage, wherein the charger is not in contact with the body;

a humidity detecting unit that detects a humidity in a space between the charger and the body;

25 a temperature detecting unit that detects a temperature in the

space between the charger and the body; and

a correcting unit that decides a magnitude of the AC voltage to be superimposed on the DC voltage based on at least one of the humidity and the temperature.

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10. The image forming apparatus according to claim 9, further comprising:

a current detecting unit that detects direct current; and

a control unit that varies the magnitude of the AC voltage in

10 accordance with the current detected and the humidity and the temperature.

11. The image forming apparatus according to claim 9, wherein the control unit varies the magnitude of the AC voltage if a change in any one  
15 of the humidity and the temperature exceeds a predetermined value.

12. The image forming apparatus according to claim 9, wherein the control unit varies the magnitude of the AC voltage after elapsing of prescribed time upon a power supply to the control unit is turned ON.

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13. The image forming apparatus according to claim 9, wherein the control unit varies the magnitude of the AC voltage upon passage of prescribed number of papers.

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14. The image forming apparatus according to claim 10, wherein the control unit carries out bias change of the AC voltage and sets the bias to a fixed value during image forming either of when an area corresponding to a non-image area on a latent image carrier is charged and when a  
5 charging bias is not applied.

15. The image forming apparatus according to claim 9, wherein the charger is a roller that includes a material having a medium electric resistance.

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16. The image forming apparatus according to claim 10, wherein the control unit changes bias of the AC voltage by a feed back control in accordance with any one of the humidity and the temperature.

15 17. A method of forming image comprising:  
detecting a humidity in a space between a charger and a body,  
wherein the charger charges the body with a voltage in which an AC  
voltage is superimposed on an DC voltage;  
deciding a magnitude of the AC voltage to be superimposed on  
20 the DC voltage based on the humidity.

18. The method according to claim 17, further comprising:  
detecting a direct current;  
varying the magnitude of the AC voltage in accordance with the  
25 current detected and the humidity.

19. The method according to claim 18, wherein the varying includes varying the magnitude of the AC voltage if a change in the humidity exceeds a predetermined value.

5 20. The method according to claim 18, wherein the varying includes varying the magnitude of the AC voltage after elapsing of prescribed time upon a power supply to the control unit is turned ON.

21. The method according to claim 18, wherein the varying includes  
10 varying the magnitude of the AC voltage after elapsing of prescribed time upon a power supply to the control unit is turned ON.

22. The method according to claim 18, wherein the varying includes  
15 varying changing a bias of the AC voltage and setting of a bias to a fixed value during image formation either of when an area corresponding to a non-image area on a latent image carrier is charged and when a charging bias is not applied.

23. The method according to claim 18, wherein the changing of the  
20 bias of the AC voltage includes performing feed back control in accordance with the humidity.

24. A method of forming image comprising:  
detecting a humidity and a temperature in a space between a  
25 charger and a body, wherein the charger charges the body with a voltage

in which an AC voltage is superimposed on an DC voltage;

deciding a magnitude of the AC voltage to be superimposed on the DC voltage based on at least one of the humidity and the temperature.

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25. The method according to claim 24, further comprising:

detecting a direct current;

varying the magnitude of the AC voltage in accordance with the current detected and the humidity.

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26. The method according to claim 25, wherein the varying includes varying the magnitude of the AC voltage if a change in the humidity exceeds a predetermined value.

15 27. The method according to claim 25, wherein the varying includes varying the magnitude of the AC voltage after elapsing of prescribed time upon a power supply to the control unit is turned ON.

28. The method according to claim 25, wherein the varying includes  
20 varying the magnitude of the AC voltage after elapsing of prescribed time upon a power supply to the control unit is turned ON.

29. The method according to claim 25, wherein the varying includes  
varying changing a bias of the AC voltage and setting of a bias to a fixed  
25 value during image formation either of when an area corresponding to a

non-image area on a latent image carrier is charged and when a charging bias is not applied.

30. The method according to claim 25, wherein the changing of the  
5 bias of the AC voltage includes performing feed back control in  
accordance with the humidity.